

THE TAXONOMIC STATUS OF
GLOSSOPHAGA MORENOI MARTINEZ AND VILLA, 1938
(MAMMALIA: CHIROPTERA: PHYLLOSTOMIDAE)

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Abstract.—A review of the nomenclatural history of Mexican *Glossophaga*, the identity of the neotype of *G. morenoi*, and the content of the species described as *G. mexicana* leads to the conclusion that *G. morenoi* is the correct name for the species currently known as *G. mexicana*.

The taxonomy and nomenclature of Mexican species of the genus *Glossophaga* have a complex history. Confusion has resulted from the misallocation of *Monophyllus leachii* Gray, 1844; the apparent loss of the type and paratypes of *Glossophaga morenoi* Martinez and Villa, 1938; and the recently confirmed presence of four species of *Glossophaga* in Mexico (Webster and Jones 1980) instead of only one, the ubiquitous *G. soricina* (Pallas, 1766).

Based on Miller's (1913) revision of *Glossophaga*, *G. soricina leachii* (Gray, 1844) was the name applied to all North American mainland populations and *G. soricina mutica* Merriam, 1898, to the Tres Marias Islands populations. In 1938, Martinez and Villa described *G. morenoi* based on material from Xiutepec, Morelos. Davis (1944) described *G. soricina alticola* from 13 km northeast of Tlaxcala, Tlaxcala, but did not mention *G. morenoi*.

Villa (1953) considered *G. soricina alticola* to be a synonym of *G. soricina morenoi*. In contrast, Davis and Russell (1954) continued to recognize *G. soricina alticola*, treating *G. morenoi* as a synonym of *G. soricina leachii*, the name by which all other Mexican mainland populations of *Glossophaga* were known. Hall and Kelson (1959:114) followed Davis and Russell (1954) but commented on their doubt concerning "the correct taxonomic arrangement of the central Mexican material."

Gardner (1962) described *G. commissarisi* (type locality 10 km SE of Tonalá, Chiapas) based on material from Nayarit, Colima, and Chiapas, Mexico. This prompted Villa (1964) to review the names that had been applied to Mexican *Glossophaga*. He concluded that *G. soricina alticola* and *G. commissarisi* were junior synonyms of *G. morenoi*, which he again recognized as a species distinct from *G. soricina*. In addition, Villa (1964:387) designated a neotype for *G. morenoi* because the original material had disappeared.

Alvarez (1966) reported on the discovery of specimens of small mammals in the Museo Nacional de Historia Natural that included some long missing types of bats and four specimens of *Glossophaga*, which he identified as *G. soricina*. Although admitting that there was no proof, Alvarez believed the four *Glossophaga* were used by Martinez and Villa (1938) when they described *G. morenoi*. Alvarez stated that Villa's (1964) designation of a neotype of *G. morenoi* was invalid, because Villa's action did not conform with Article 75 of the International Code of Zoological Nomenclature (Code). Alvarez (1966) did not consider Villa's work a revision of a genus because the description of the neotype did not permit its recognition and its characterization was not consistent with the original description. Thus Alvarez concluded that *G. morenoi* was best considered a "*nomen dubius*."

Baker (1967) did not use the name *G. morenoi*. Instead he used the names *G. alticola* and *G. commissarisi*, in addition to *G. soricina*, based on identifications by J. Knox Jones, Jr., for Mexican species.

In their review of North American *Glossophaga*, Webster and Jones (1980) clarified relationships among the Middle American and Mexican species. They recognized four sympatric species in Mexico: *G. soricina*, *G. leachii*, *G. commissarisi*, and *G. mexicana*. The latter they described as new. They assigned *G. soricina alticola* and *G. morenoi* to *G. leachii*, citing Villa's (1953, 1964, 1967) argument that *G. morenoi* was an earlier name for *G. soricina alticola*. Therefore, this made *G. morenoi* a junior synonym of *G. leachii*. Webster and Jones (1980:5) also described *G. soricina handleyi* to provide a name for the subspecies that had been known for so many years as *G. soricina leachii*.

Glossophaga soricina leachii (with *G. mutica* and *G. morenoi* as synonyms), *G. alticola*, and *G. commissarisi* were the three taxa recognized by Hall (1981) as occurring in Mexico. In 1982, Webster and Jones named and described the northwestern Mexican population of *G. commissarisi* as *G. c. hespera*.

Urbano and Sanchez (1983) agreed with Webster and Jones' (1980) decision to place *G. morenoi* in the synonymy of *G. leachii*. They incorrectly identified the neotype of *G. morenoi* as an example of *G. soricina* and reiterated Alvarez's (1966) opinion that Villa (1964) had not conformed to the requirements of Article 75 (sections a and c) of the Code when designating a neotype for *G. morenoi*.

Webster and Jones (1984a) proposed the name *G. mexicana brevirostris* for the northern population of *G. mexicana*. They also commented (p. 4), "It is of passing note that the specimen (UNAM 7383) designated as the 'neotype' of *Glossophaga morenoi* by Villa-R. (1964) actually represents *G. m. brevirostris* . . ." In the mammalian species account on *G. leachii*, Webster and Jones

(1984b) provided a key to the species, remarked on the taxonomic history of *G. leachii*, and included *G. morenoi* in the synonymy of *G. leachii*.

The latest published report concerning the systematics and natural history of Mexican *Glossophaga* is the mammalian species account on *G. mexicana* by Webster and Jones (1985). This account contained no mention of *G. morenoi*.

The argument advanced by Alvarez (1966) and Urbano and Sanchez (1983) that Villa's (1964) designation of the neotype of *G. morenoi* was invalid because he did not conform with the requirements of Article 75 of the Code (Stoll et al. 1964) is not supported by the evidence. Villa's review of the taxonomy of the Mexican species of *Glossophaga* known to him, although not a revision of a genus, is clearly "revisory" in the sense of Article 75(a) of the Code. Furthermore, Villa's designation conforms with the requirements of Article 75(c) of the Code. In other words, although Villa's (1964) taxonomic conclusions were wrong, his actions were nomenclaturally correct. Therefore, the name *G. morenoi* has standing based on the neotype.

The conspecificity of the neotype of *G. morenoi* and specimens identified by W. David Webster as *G. mexicana* has been independently confirmed by Oscar Sanchez and Rodrigo Medellín (pers. comm.). In the original description, *G. morenoi* was characterized as similar to *G. soricina* in dental formula and morphology of the upper and lower incisors. However, differences included larger size, absence of a tail, and undefined differences in the ear and nose leaf. The upper incisors of *G. mexicana* are more similar to those of *G. soricina* in size and procumbency than are those of either *G. leachii* or *G. commissarisi*, but the lower incisors of *G. mexicana* are distinctly more similar to those of *G. leachii* and *G. commissarisi*. In Mexico, *Glossophaga leachii* (with *G. alticola* a synonym) averages larger than *G. soricina* in external measurements

and in breadth of braincase whereas *G. commissarisi* averages smaller than *G. soricina* in all dimensions; however, *G. mexicana brevirostris* is approximately the same size or slightly larger than *G. soricina* and *G. mexicana mexicana* is even larger (Webster 1983). The purported absence of a tail cannot be evaluated at this time and may represent an oversight on the part of Martinez and Villa (1938).

A factor that undoubtedly influenced opinions concerning the taxonomy of Mexican *Glossophaga* was the number of species believed to be present in the country. The prevailing opinion up to the time Gardner (1962) described *G. commissarisi* was that there was one species (*G. soricina*) with one, two, or possibly three subspecies. When describing *G. commissarisi*, Gardner (1962:4) recognized the presence of two additional species besides *G. soricina*. One represents *G. leachii* as understood today; the other was later described as *G. mexicana* (see Webster and Jones 1980:6). Nevertheless, Villa (1964, 1967) apparently believed that only two (*G. soricina* and *G. morenoi*) were present. It remained for Webster and Jones (1980) to sort out the taxa and to confirm the presence of four species in Mexico.

Clearly, the neotype of *G. morenoi* represents the same species described by Webster and Jones (1980) as *G. mexicana*. Villa's (1964) designation of the neotype of *G. morenoi* conforms to the requisites of Article 75 of the International Code of Zoological Nomenclature. Therefore, *G. mexicana* is a junior synonym of *G. morenoi*, whose synonymy is described as follows:

Glossophaga morenoi Martinez and Villa,
1938

Moreno's long-tongued bat

Glossophaga morenoi Martinez and Villa,
1938:347; type locality "Xiu-tepec," Morelos, Mexico. Type and paratypes lost (Villa 1953, 1964, 1967). Neotype designated by Villa (1964:387); type locality

"Cueva del Idolo, 1 Km. S. tequesquintengo 970 m., Estado de Morelos," Mexico.

Glossophaga mexicana Webster and Jones,
1980; type locality "Río Guamól, 34 mi. S (by Hwy. 190) La Ventosa Jct., Oaxaca, México."

Glossophaga mexicana brevirostris Webster and Jones,
1984a:2; type locality "6 mi. W Yautepec, 4500 ft., Morelos, México."

The northern subspecies distinguished by Webster and Jones (1984a) as *G. mexicana brevirostris* should be known as *G. morenoi morenoi* Martinez and Villa, 1938, and the southern populations as *G. morenoi mexicana* Webster and Jones, 1980.

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